# Integrated Air Situation Picture Solutions

## Multi-Range, Multi-Discipline (Active & Passive), Multi-Layer, Multi-Band Sensing

Over the last decade, new types of aerial threats (breathing and non-breathing) have emerged due to the advancement of low RCS (Radar Cross Section) stealth technology. Platforms such as drones and UAVs as well as tactical aerial weapons, RAM (Rockets, Artillery, Mortars), ballistic and other missile types have all created new challenges to integrated Air and Missile Defense (AMD) and Air Surveillance systems. Wherever positioned, AMD and Air Surveillance systems are required to deal with munitions launched from land, air and naval platforms.

In the face of these nascent threats, ELTA offers intelligent 360° active and passive sensors to provide multi-layer, multi-discipline systems for detection of long and medium range, low slow flying targets, ensuring that no aerial threat will go unnoticed and sufficient time will be provided to take effective action.

ELTA's very long range radars perform early warning while an array of dedicated radar systems such as ELTA's renowned Multi Mission Radar (MMR) detect, track and provide essential target data to Air Defense Weapon Systems that are used to eliminate the threat. Tactical MMRs are offered to protect maneuvering forces in the field.

## Active/Passive Scheme

| | Emitting Targets | Non Emitting Targets |
|---|---|---|
| ACTIVE SENSOR | IFF & Data Link | RADAR |
| PASSIVE SENSOR | SIGINT+ADS-B | OPTIC & PCL |

ELTA provides a wide range of advanced passive sensor solutions utilizing ELINT, COMINT, EO/IR and PCL (Passive Coherent Location) systems complementing the active sensor systems. The ability to perform passive air surveillance in parallel and fuse the data with active radars enhances the detection, classification and identification of these evolving threats. A multi-sensor system offers "more eyes on target", increases the quantity and quality of target data, improves redundancy, and offers greater flexibility against countermeasures.

With the aim of maximizing the sensors synergy and overall system performance (mission and arena oriented), all the sensors are networked where data information is shared, thereby providing better survivability, high quality of output, better energy management, fusion of passive and active data, and more.

## Sensor Network Main Tasks

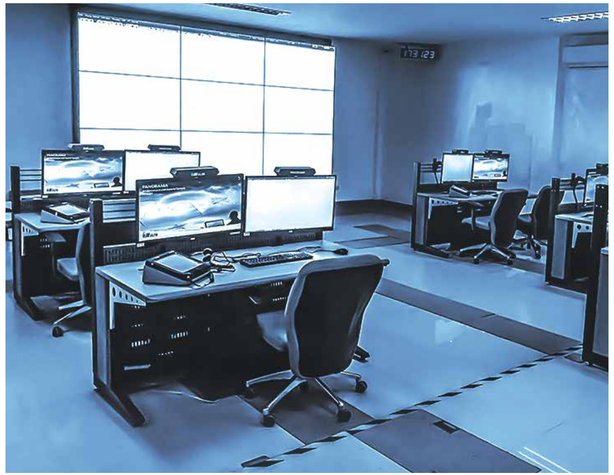
| PLAN | MONITOR | MANAGE |
|---|---|---|
| Pre Mission Planning & Deployment Optimization | Monitoring of Multiple Sensors | Online Planning Optimization & Maximizing Performance |

# Air Command, Control & Intelligence Systems

## PANORAMA - Air Command and Control System

ELI-4000

The ELI-4000 PANORAMA is an advanced military Command and Control (C4I) System that integrates modern Air Forces defensive and offensive C4I requirements into a single unified system. The system interfaces seamlessly with all the available surveillance (active and passive) sensors to provide the most comprehensive Recognized Air Picture (RAP). Moreover, it collects external ASP and SIGINT data and creates a unified single RAP.



The system enables execution of the entire mission cycle including: Mission Planning, Air Tasking Order (ATO) creation and dissemination, RAP generation, Threats Evaluation, Battle Management tools, Command and Control advanced applications, Decision Support Tools and more.

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# Air Surveillance & Air Defense
## Sensor Solutions

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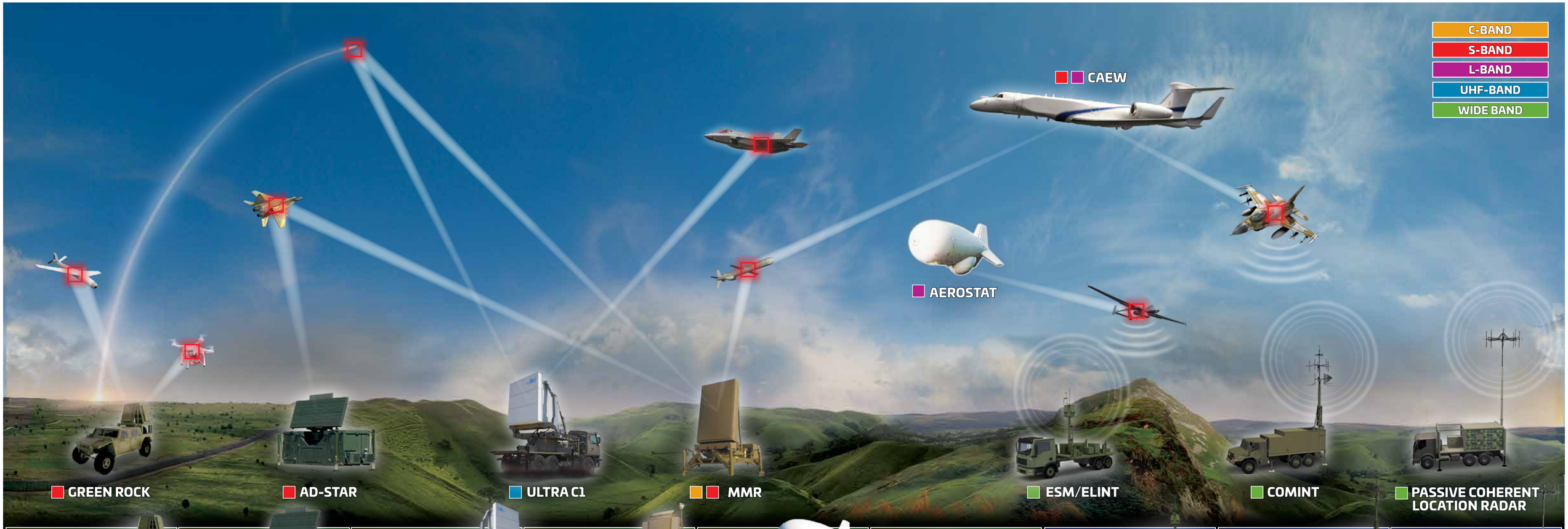


## Green Rock ELM-2138M

Tactical radar system for air-surveillance, Ground Based Air Defense (GBAD), and Counter-Rocket, Artillery & Mortar (C-RAM) missions. 360° azimuth coverage utilizing 4x AESA non-rotating planer antennas. High accuracy and update rate supports short range air defense (SHORAD).

## AD-STAR ELM-2288

Ground-based 3D solid-state radar for long-range aerial surveillance and Early Warning (EW). With 360° azimuth coverage, AD-STAR uses multiple digital transmitters and receivers to ensure high redundancy, reliability and availability while providing maximum flexibility in waveform and beam-shape selection.

## Ultra C1 ELM-2090U

Early Warning and long range search and track radar designed to autonomously detect and simultaneously track dozens of low RCS such as stealth targets, Ballistic Missiles (BMs), and other airborne targets at very long ranges. The modular digital 4D Active Electronic Steering Array (AESA) covers 120°-360° azimuth & up to 70° elevation.

## MMR/MS-MMR ELM-2084

Multi-Mission Radar family featuring an advanced 3D Active Electronically Steered Array (AESA) with 120°-360° azimuth & up to 50° elevation coverage for Air Defense (AD) and Artillery Weapon Location (WLR) missions. Multi-Sensor MMR fuses additional ELTA sensors: (SIGINT, LDS, EO/IR, radars & IFF).

## Aerostat ELM-2083

The AESA radar provides long-range early warning and airspace control. Elevated, it overcomes topography limitations enabling longer ranges and a clearer LOS. The radar is able to detect and track multiple targets including aircraft, cruise missiles, loitering munition and other low flying threats.

## CAEW ELM-2085

High performance fuel-efficient business jets performing Airborne Early Warning and Control (AEW&C) solutions. Equipped with the latest generation of AESA radar & GaN technologies and integrated with an advanced AEW&C Sensor Suite, CAEW provides air defense and battle management.

**ACTIVE SENSORS**

## ESM/ELINT ELL-8385

Intercepts, identifies, locates and analyzes signals emitted from aerial threats. Supports 360° wide band instantaneous coverage. Automatic system process supported by AI. The system supports ELTA's radars for augmenting air situation picture and GBAD.

## COMINT ELK-7071

Intercepts, analyzes, identifies, locates and monitors communication networks and datalinks in dense and complex communication environments - creating a real-time Electronic Order of Battle (EOB). Monitors communication of emitting aerial targets.

## Passive Coherent Location Radar ELK-7080

Passive radar that covertly detects and tracks long-range aerial threats with a high level of accuracy and provides air situation picture without emitting a signal and exposing its location. Exploits analog FM broadcasting and Digital Audio Broadcasting (DAB).

**PASSIVE SENSORS**